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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Robert G. Gann

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EXAMINER

TRAN, NHAN T

ART UNIT

PAPER NUMBER

2622

NOTIFICATION DATE

DELIVERY MODE

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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/623,353	Applicant(s) GANN ET AL.	
	Examiner NHAN T. TRAN	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 October 2007 and 30 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 13-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 13-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicants' arguments with respect to claims 1-10, 13-21 have been considered but are moot in view of the new ground(s) of rejection.

Additionally, the Examiner would like to address the Applicants' arguments for claims 8 and 9. The Applicants assert that Takematsu does not teach a flash integrated with the housing, and the proposed modification of Kanamori would appear to require extensive reworking of the camera system in Kanamori and teach away from their combination.

In response, the Examiner understands the Applicants' arguments but respectfully disagrees.

Takematsu does disclose a flash (3 in Fig. 1) that is integrated with enclosure. Furthermore, Kanamori further suggests that modifications or alternate constructions are expected by one skilled in the art (see Kanamori, col. 12, lines 15-20). Therefore, the combination of Takematsu and Kanamori would not teach away from the individual system but rather improve the system for capturing good photographs with right exposure as suggested by Takematsu.

The Applicants further argue that Takematsu and Kanamori do not teach or suggest an ergonomic grip.

In response, the Examiner respectfully disagrees. It is clearly seen from Fig. 1-3 of Takematsu that both the digital camera and the enclosure comprise ergonomic grips.

Each ergonomic grip is represented by a unique protrusion portion that is larger than other portions. Since this grip is designed to help the user to grip the camera or enclosure easily and comfortably by its conventional shape, it is considered as an ergonomic grip.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-10, 13-21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Each of the independent claims 1, 19 and 21 recites “**a second processor that electrically communicates with the photosensor over conductive paths and through coupling connectors that are collectively devoid of any intermediary active electronic component located between the second processor and the photosensor.**” However, the specification does not reasonably disclose this feature. Although specification discloses “[W]hen the digital camera 100 is communicatively coupled and physically coupled with camera enclosure 200, the camera photosensor 504 (Fig. 5) of the digital camera 100 is used to capture images using features provided

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by the camera enclosure 200, as described in greater detail below. Thus, a single camera photosensor 504 is used to capture images with digital camera 100, and to capture images when the digital camera 100 is coupled to the camera enclosure 200.” (specification, paragraph [29]), the specification does not clearly disclose that the enclosure processor 524 (the second processor) that electrically communicates with the photosensor over conductive paths and through coupling connectors that are collectively devoid of any intermediary active electronic component located between the second processor and the photosensor. The Examiner also notes that, in Fig. 5 and paragraph [57], the enclosure operation logic 508 is stored in active memory component 506 located in the digital camera 100. Thus, the enclosure processor 524 must not devoid such the active memory component 506 for reading and executing the operation logic in order to operate the digital camera. No support for the above claimed feature is found in the specification.

Regarding claims 2-10, 13-18 and 20, these claims are also rejected as being dependent of claims 1 or 19.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-10, 13-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Each of the independent claims 1, 19 and 21 requires that the image sensor is controlled by *the combination of the first processor and the second processor*. However, each of these claims further requires that the second processor electrically communicates with the photosensor over conductive paths and through coupling connectors that are collectively devoid of any intermediate active electronic component (the first processor) located between the second processor and the photosensor. It is not clear how the photosensor can be controlled by the combination of the first and second processors without communication therebetween the processors. Even if the photosensor is *alternatively* shared by the first processor and the second processor, one skilled in the art would quickly recognize that the second processor must communicate with the first processor by inherency in order to take place. Thus, the claimed subject matter is vague.

(Please note that the following art rejection is applied as best understood in view of the 35 U.S.C 112 rejection above)

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-7, 13-15, 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanamori et al (US 6,138,826).

Regarding claim 1, Kanamori discloses an image capture system (Figs. 1-4; col. 5, lines 6-12) comprising:

a digital camera (e.g., a digital camera 18), the digital camera comprising at least a photosensor and a first processor (see Fig. 4 and col. 5, lines 6-12 and col. 7, lines 1-4, wherein a photosensor and a processor are inherent in such the digital camera 18 for capturing an image and displaying on the camera's LCD 60 as disclosed);

an enclosure (a waterproof case 10) configured to receive the digital camera (Figs. 1-4 and col. 5, lines 6-12), configured to have a plurality of features (i.e., capture modes at dial button 66, exposure correction 68, flash modes 70, display mode 72, etc...as shown in Fig. 2) controlling operation of the digital camera, and configured to capture an image using the photosensor of the digital camera (see Fig. 2; col. 6, line 25 – col. 7, line 4 in which the waterproof case 10 captures an image using the image sensor of the digital camera 18 by controlling the operation of the digital camera in response to the operational features provided on the waterproof case), the plurality of features each increasing operational sophistication of the digital camera, the enclosure further including a second processor (a control circuit in the enclosure) that electrically communicates with the photosensor over conduction paths (inherent internal bus and wires) and through coupling connectors (at cable 80 shown in Fig. 4), the second processor used in conjunction with the first processor to control the capture of an image on the photosensor (see col. 3, lines 49-65 and col. 6, lines 25-67).

Kanamori does not explicitly disclose that the second processor communicates with the photosensor over the conductive paths and through coupling connectors that are collectively devoid of any intermediary active electronic component located between the second processor and the photosensor. It is obvious in Fig. 2 of Kanamori that when the enclosure processor sets the camera to a capture mode (i.e., auto in Fig. 2), the enclosure processor does not necessarily communicate with active electronic components (i.e., image decoder or reader) of the reproduction mode (e.g., reproduce in Fig. 2) in the digital camera.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to configure the image capture system in Kanamori such that the second processor communicates with the photosensor over the conductive paths and through coupling connectors that are collectively devoid of any intermediary active electronic component located between the second processor and the photosensor in a capture mode so as to reduce power consumption and eliminate unnecessary communication.

Regarding claim 2, Kanamori further discloses that the first processor and the second processor are further configured to control operation of the digital camera and the enclosure (see col. 6, line 25 – col. 7, line 4).

Regarding claim 3, also discloses by Kanamori is that the first processor is configured to control operation of the digital camera and the enclosure (see col. 10, line

58 – col. 11, line 20 and col. 7, lines 1-4, wherein the inherent first processor included in the digital camera 18 is to process signal(s) for controlling both the operation of the digital camera and the enclosure by capturing an image, displaying the image in addition to measuring object's brightness and outputting a slight flash emission at the built-in flash of the digital camera *or* a flash control signal via a synchronization cable. The flash control signal sent from the digital camera based on the measurement of object's brightness controls the waterproof case 10 by triggering the flash device 28 for synchronization); the second processor is configured to control at least partial operation of the enclosure (i.e., controlling flash; see col. 6, lines 25-65 and col. 10, lines 11-41).

Regarding claim 4, see the Examiner's analysis of claim 3 in which the second processor controls the operation of the enclosure (col. 6, lines 25-65 and col. 10, lines 13-41).

Regarding claim 5, it is clear that the first processor and the second processor operate in conjunction to control operation (flashing operation) of the enclosure. See col. 10, line 11 – col. 11, line 20 in which the first processor of the digital camera controls the flash device 28 of the waterproof case in automatic flash mode by measuring object's brightness and outputting flash synchronization signal via a cable or a slight flashing of the camera's built-in flash to the flash control circuit 100. The flash control circuit 100 of the waterproof case then directly controls quantity of flash emission of flash device 28 to emit much more flash quantity than the camera's built-in flash.

Regarding claim 6, Kanamori discloses that the enclosure further comprises:
a first portion (a case body 12 shown in Fig. 3 and col. 5, lines 6-12);
a second portion (a lid 16 shown in Fig. 3 and col. 5, lines 6-12);
wherein the digital camera (18) is configured to be enclosed within the first portion and the second portion (see Figs. 3 & 4 and col. 7, lines 8-30).

Regarding claim 7, also clearly disclosed by Kanamori is that the enclosure further comprises a receptacle (Figs. 3 & 4) configured to receive the digital camera (see col. 7, lines 8-30).

Regarding claim 13, it is also seen in Kanamori that the enclosure further comprises at least one indicator (flashing of flash device 28) configured to indicate an operation of image capturing not indicated by the digital camera. See Figs. 1-4 and col. 10, line 11 – col. 11, line 20 in which the digital camera 18 and its built-in flash is completely enclosed in the enclosure 10 and therefore cannot indicate to the user by flashing. Instead, the enclosure 10 produces flash emission by the flash device 28 to indicate that the image is captured.

Regarding claim 14, Kanamori clearly discloses that the digital camera further comprises a first lens (a taking lens of the digital camera 18) and the enclosure comprises a second lens (a wide angle lens 56 of the enclosure 10 shown in Fig. 5), the

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second lens having at least one feature (wide angle feature) different from the first lens (see col. 9, lines 48-65).

Regarding claim 15, as disclosed in col. 9, lines 48-65, the enclosure further comprises a lens coupler (Fig. 5) configured to couple the second lens to the enclosure, and where the lens coupler permits the second lens to detach (by unscrewing wide angle lens 56) from the enclosure.

Regarding claim 19, this method claim is also met by the analysis of the apparatus claim 1. Furthermore, Kanamori discloses selecting at least one image capture feature (i.e., a capture mode or a flash mode) among the plurality of image capture features using a device (e.g., operating buttons) residing on the enclosure (Fig. 2 and col. 6, lines 25-63).

Regarding claim 20, Kanamori further discloses the step of capturing the image with the digital camera when the digital camera is decoupled from the camera enclosure (see col. 4, lines 9-11 and col. 7, lines 1-4, 60-67 in which the digital camera 18 operates to capture images as a stand-alone digital camera when it is detached from the enclosure 10).

8. Claims 8 & 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanamori et al. (US 6,138,826) in view of Takematsu (US 2003/0214593 A1).

Regarding claim 8, although Kanamori teaches the waterproof case 10 including a built-in flash device 18 and the digital camera causing the flash device 28 to flash in accordance with a synchronous signal sent from the digital camera during photography (col. 5, lines 20-30 and col. 11, lines 11-20), Kanamori does not explicitly teach that the enclosure further comprises a coupler configured to receive a flash attachment, and wherein the digital camera is configured to cause the flash attachment to flash.

However, in the reference to Takematsu, a digital camera (15) enclosed in a waterproof housing (9) is taught (see Figs. 1-4; paragraphs [0001] and [0030]). The waterproof housing includes both a built-in flash (3) and an external flash (11) attached to a coupler (7) of the housing such that the external flash (11) and/or the built-in flash (3) is configured to flash in response to the operation of the shutter release during photography (Takematsu, Fig. 1 and paragraphs [0036] and [0040]). According to Takematsu, the use of both of the built-in flash (3) in the housing and the external flash attachment (11) provides the imaging apparatus to capture good photographs with right exposures as suggested by Takematsu, paragraph [0012].

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the enclosure of Kanamori to include a coupler configured to receive a flash attachment such that the digital camera would be configured to cause the flash attachment and/or the built-in flash of the enclosure to flash during photography so as to obtain good photographs with right exposures under different lighting conditions as suggested by Takematsu.

Regarding claim 9, Kanamori discloses that the digital camera (18) further comprises a first grip (an inherent side portion of the camera) and the enclosure (10) further comprises a second ergonomic grip larger than the first grip (see Kanamori, Figs. 1, 2 & 4). Kanamori, however, does not explicitly disclose that the first grip is an ergonomic grip.

As taught by Takematsu, a digital camera (15) comprises an ergonomic grip (under shutter button 3 shown in Fig. 3 and paragraphs [0029] & [0030]). The digital camera is enclosed within a waterproof housing (9) having another ergonomic grip (Fig. 2). Such ergonomic grip of the camera would provide the user a better and comfortable handling of the camera in ergonomic fashion when the camera is detached from the housing to operate as a stand-alone device.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the digital camera of Kanamori with an ergonomic grip which is smaller than the ergonomic grip of the waterproof case to provide better and comfortable handling of the digital camera when the digital camera is detached from the housing to operate as a stand alone device.

9. Claims 10 & 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanamori et al. (US 6,138,826) in view of Da Silva (US 6,819,866 B2).

Regarding claim 10, Kanamori teaches that the digital camera comprises a first display (LCD 60 shown in Fig. 4) and the enclosure comprises a transparent window

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(62) (col. 5, lines 64-67). Kanamori does not teach a second display located on the enclosure and being larger than the first display of the camera.

Da Silva teaches a waterproof housing (2) that contains a camera (4) therein (Figs. 1-3). Da Silva further teaches a LCD monitor (20) provided on the housing for displaying images and/or information related to the system (see Da Silva, col. 8, line 65 – col. 9, line 7 and col. 10, lines 50-51). According to Da Silva, the LCD monitor is preferably **at least 3 inches in size** which is relatively larger than a conventional LCD monitor of a camera (see Da Silva, col. 10, lines 40-49).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the enclosure of Kanamori in view of the teaching of Da Silva to replace the transparent window 62 with a relatively large LCD display which is larger than the LCD display of the digital camera so as to improve viewing area with larger view of a captured image while avoiding any limitation on a user's peripheral vision as suggested by Da Silva, col. 9, lines 1-8.

Regarding claim 21, Kanamori discloses a method for capturing images (col. 2, lines 46-49), the method comprising the steps of:

generating an image capture instruction (a shutter release instruction) using a device (i.e., a shutter button 34 shown in Figs. 1-3) residing on an enclosure (a waterproof case 10) (see col. 6, line 25 – col. 7, line 4);

communicating (via cable 80 and connector 80A shown in Fig. 4) the image capture instruction to a digital camera (a digital camera 18) coupled to the enclosure and residing within a recess of the enclosure (Fig. 4 and col. 6, line 25 – col. 7, line 4); capturing an image with a photosensor (an inherent image sensor of the digital camera 18) residing in the digital camera, the step of capturing performed in accordance with the received image capture instruction (i.e., the shutter release instruction), the step of capturing implemented under control of a combination of a first processor (digital camera processor as discussed in claim 1) residing in the digital camera and a second processor (enclosure processor as discussed in claim 1) residing in the enclosure, the first processor and the second processor connected to the photosensor (see col. 6, line 25 – col. 7, line 16 and note the Examiner's response in section 2 above).

Kanamori fails to disclose that the capture instruction is generated by a remote device communicatively coupled to the enclosure.

In the same field of endeavor, Da Silva teaches a waterproof housing (2) that contains a camera (4) therein (Figs. 1-3) and a universal remote control device (keypad 11 shown in Fig. 2) for controlling the operation of the camera so that the user can control a plurality of different types of video cameras in a convenient manner as suggested in col. 1, lines 30-42; col. 7, lines 46-58 and col. 8, lines 49-61.

Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Kanamori and Da Silva to provide the enclosure with a universal remote control device for controlling the camera enclosed therein by generating an image capture instruction in addition to other commands so as to enable

the user to remotely control a plurality of different types of video cameras in a convenient manner.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NHAN T. TRAN whose telephone number is (571)272-7371. The examiner can normally be reached on Monday - Friday, 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nhan T. Tran/
Primary Examiner, Art Unit 2622